DETAILED ACTION

1.   Examiner initiated telephone interview has been held on December 11, 2009 with

Applicant's representative, CHOI, ALICIA, to incorporate dependent claim 11 with base claims,

amend claim 8 that was dependent on the cancelled claim 6, and properly write the claims for

antecedent basis. The Applicant's representative authorized the Examiner, on December 15, 2009

to amend the claims by Examiner's amendment as shown below.

Response to Amendment

2.   The 101 rejection is withdrawn in view of applicant's amendment.

Response to Arguments

3.   Applicants arguments submitted on 08/19/2009 are persuasive.

EXAMINER'S AMENDMENT

4.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

       Authorization for this examiner's amendment was given in a telephone interview with

Applicant's representative, CHOI, ALICIA on December 15, 2009.

   Claims are amended as follows:

   Claims **1-5, 8-9, and 15-24** are amended and claims 10-11 are currently cancelled.

1.   (Currently Amended) A system, comprising:

a hub comprising a transceiver;

a plurality of communication nodes connected by a data link to the transceiver by a common bus or a wireless broadcast channel, the data link being a shared data link whereby any node connected to the data link has access to communications broadcast over the common bus or wireless broadcast channel; and

a communication controller configured to allocate link-level addresses to the communication nodes,

wherein the communication nodes may be identified for communications over the common bus or wireless broadcast channel,

wherein the communication controller is further configured to change from time to time the link-level addresses allocated to all of the plurality of communication nodes connected to the common bus or wireless broadcast channel and to transmit the newly allocated link-level addresses to respective communication nodes in an encrypted form over the common bus or wireless broadcast channel,

wherein the ~~communication~~ system comprises a data distribution unit connected between the data link and at least one external data source, and wherein the data distribution unit is configured to forward data from the data source to the communication nodes via the data link, ~~and~~

wherein the data distribution unit is further configured to forward the data to the plurality of communication nodes in a random or pseudo-random order over the common bus or wireless broadcast channel<u>;</u>

<u>wherein the data link is an Ethernet link, and</u>

wherein the link-level addresses are Ethernet PHY ID addresses.

2.   (Currently Amended) [[A]] The system as claimed in claim 1, wherein communications

over the data link comprise an address part, indicating the address of the one of the

communication nodes to which the respective communication is directed, and a payload part.

3.   (Currently Amended) [[A]] The system as claimed in claim 2, wherein the address part is

not encrypted.

4.   (Currently Amended) [[A]] The system as claimed in claim 2, wherein the payload part is

encrypted.

5.   (Currently Amended) [[A]] The system as claimed in claim 1, wherein communications

over the data link are in the form of data packets.

8.   (Currently Amended) [[A]] The system as claimed in claim [[6]] 1, wherein the data

distribution unit is configured to, when it would otherwise not be transmitting data to the

communication nodes, transmit over the data link communications addressed to a link-level

address that is not allocated to any of the communication nodes.

9.   (Currently Amended) [[A]] The system as claimed in claim 1, wherein a communication

node is configured to store a link-level address allocated to it and to ignore communications on

the data link addressed to link-level addresses other than that link-level address.

      10.   (Cancelled)

      11.   (Cancelled)

15.   (Currently Amended) An apparatus, comprising:

    a controller configured to

        allocate link-level addresses to a plurality of communication nodes connected by

a data link to a transceiver of a hub by a common bus or a wireless broadcast channel,

wherein the communication nodes may be identified for communications over the data

link, the data link being a shared data link whereby any node connected to the data link

has access to communications broadcast over the common bus or wireless broadcast

channel,

        change from time to time the link-level addresses allocated to all of the plurality

of communication nodes, connected to the common bus or wireless broadcast channel,

        transmit the newly allocated link-level addresses to respective communication

nodes in an encrypted form, and

        forward data the plurality of communication nodes in a random or pseudo-

random order over the common bus or wireless broadcast channel;

        wherein the data link is an Ethernet link, and

wherein the link-level addresses are Ethernet PHY ID addresses.

16.   (Currently Amended) ~~An~~ The apparatus as claimed in claim 15, wherein the controller is

further configured to transmit the newly allocated link-level addresses to the respective node in a

communication comprising an address part configured to indicate a current address of the

respective node and a payload part comprising the newly allocated addresses in encrypted form.

17.   (Currently Amended) ~~An~~ The apparatus as claimed in claim 15, wherein the controller is

further configured to:

        allocate encryption keys to each of the plurality of communication nodes;

        change from time to time the encryption key allocated to each of the plurality of

communication nodes; and

        transmit the newly allocated encryption key to the respective node in encrypted

form.

18.   (Currently Amended) ~~An~~ The apparatus as claimed in claim 17, wherein the controller is

further configured to transmit the newly allocated encryption key to the respective node in the

payload part that contains a newly allocated address for the respective node.

19.   (Currently Amended) ~~An~~ The apparatus as claimed in claim 15, wherein the controller is

further configured to change the link-level addresses allocated to each of the plurality of

communication nodes at one of random, pseudo-random, or periodic intervals.

20.   (Currently Amended) A method, comprising:

allocating link-level addresses to a plurality of communication nodes connected by a data

link to a transceiver of a hub by a common bus or a wireless broadcast channel, wherein the

communication nodes may be identified for communications over the data link, the data link

being a shared data link whereby any node connected to the data link has access to

communications broadcast over the common bus or wireless broadcast channel;

changing from time to time the link-level addresses allocated to all of the plurality

of communication nodes;

transmitting the newly allocated link-level addresses to a respective communication node

in an encrypted form; and

forwarding data to the plurality of communication nodes in a random or pseudo- random

order over the common bus or wireless broadcast channel;

wherein the data link is an Ethernet link, and

wherein the link-level addresses are Ethernet PHY ID addresses.

21.   (Currently Amended) [[A]] The method as claimed in claim 20, wherein the transmitting

comprises transmitting the newly allocated link-level addresses to the respective node in a

communication comprising an address part configured to indicate a current address of the

respective node and a payload part comprising the newly allocated addresses in encrypted form.

22.   (Currently Amended) [[A]] The method as claimed in claim 20, further comprising:

allocating encryption keys to each of the plurality of communication nodes;

changing from time to time the encryption key allocated to each of the plurality of

communication nodes; and

transmitting the newly allocated encryption key to the respective node in encrypted form.

23.   (Currently Amended) [[A]] The method as claimed in claim 22, wherein the transmitting

further comprises transmitting the newly allocated encryption key to the respective node in the

payload part that contains a newly allocated address for the respective node.

24.   (Currently Amended) [[A]] The method as claimed in claim 20, wherein the changing

comprises changing the link-level addresses allocated to each of the plurality of communication

nodes at one of random, pseudo-random, or periodic intervals.

Allowable Subject Matter

5.   Claims **1-5, 8-9, and 15-24** are allowed and claims 6-7, 10-14 and 25-29 are canceled.

6.   Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ELENI A. SHIFERAW whose telephone number is (571)272-

3867. The examiner can normally be reached on Mon-Fri 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nasser R. Moazzami can be reached on (571) 272-4195. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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/Eleni A Shiferaw/
Primary Examiner, Art Unit 2436